

REMARKS

Presently, Claim 51 is amended to incorporate limitations of Claim 59, Claim 59 is canceled, and Claim 68 is added. Claims 1-50, 52, 58, and 61-66 were previously cancelled. Accordingly, Claims 51, 53-57, 60, 67, and 68 are pending in this application.

Present claim amendment to Claim 51 is the same as that filed in the March 23, 2011 Response to the Final Office Action. The Advisory Action stated that the amendments filed with the March 23, 2011 Response were not entered because they raised new issues that would require further consideration and/or search.

Additionally, Claim 68 is added with this Response. Claim 68 is supported in the specification, for example on page 1, lines 15-24 and on page 2, lines 27-30.

Entry and consideration of the present amendments and remarks is respectfully requested.

Claim Rejections Under 35 U.S.C. § 102(b) Over Plehiers

Claims 51, 55, and 59 were rejected in the Final Office Action under 35 U.S.C. § 102(b) as anticipated by PCT publication WO 02/094838 (“Plehiers”).

With respect to Claim 51, the Examiner stated in the Final Office Action that “Plehiers et al. teach hydrolysable paint compositions (page 1, lines 12-20) comprising a compound that is an organosilyl ester of a carboxylic acid wherein the carboxylic acid part of the ester is saturated at the alpha carbon” and that “[s]everal components in Plehiers et al. can be considered co-binders such as the other monomers and comonomers in the binders (page 8, lines 9-18).” Office Action at 2.

Applicants respectfully traverse this rejection. The organosilyl ester saturated at the alpha carbon and cited by the Examiner is identified in Plehiers as an acyloxysilane of formula (II). Plehiers, page 4, lines 3-13. This acyloxysilane of formula (II) is not a component of a hydrolysable paint composition as required in Claim 51. Rather, the acyloxysilane of formula (II) is an intermediate used in preparation of an unsaturated silyl ester (*i.e.*, compound of formula (I)) which in turn is used as a monomer or a comonomer in the production of a hydrolysable paint composition. *See* Plehiers, page 3, line 25 – page 4, line 20. There does not appear to be any disclosure in Plehiers that a residual amount of the saturated acyloxysilane of formula (II) is present in a paint composition. Nor does there appear to be any reference in Plehiers to combining this acyloxysilane of formula (II) with the co-binders.

The Examiner stated in the Advisory Action that “[t]he Applicant has made the argument that there is no evidence that the organosilyl ester of Plehiers is present in the final composition” but “[t]his is not persuasive because it is present in a composition that is used for painting.” The Examiner further stated that “[i]t is noted that a ‘paint composition’ is merely a recitation of an intended use” and “[a] recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art.”

Applicants respectfully disagree with these conclusions. As discussed above, the acyloxysilane of formula (II) is disclosed in Plehiers as an intermediate compound used in the synthesis of an unsaturated silyl ester. There is no disclosure or suggestion in Plehiers that the acyloxysilane of formula (II) is present in a composition that could be used for painting. The acyloxysilane of formula (II) is discussed in Plehiers only as a synthetic intermediate. Pending Claim 51 is directed to a paint composition comprising specified silylesters. In contrast, Plehiers

does not disclose a paint composition comprising presently claimed silylesters. The acyloxysilane of formula (II) is never disclosed in Plehiers as a component of a paint composition. Accordingly, Plehiers does not anticipate Claim 51.

Additionally, Claim 51, as amended, requires an antifoulant while Plehiers does not disclose paint composition comprising an antifoulant. The Examiner stated in the Final Office Action that Plehiers teaches an antifoulant on page 1, lines 5-20. *See* Final Office Action, page 2, 35 U.S.C. § 102(b) rejection of Claim 59. However, this observation is erroneous. The cited disclosure in Plehiers states that the invention relates to “modern antifouling coatings” and “antifouling paints” but it does not disclose compositions additionally comprising an antifoulant as a component of the disclosed compositions. In contrast, the antifoulants of the present invention are additional components of the claimed compositions and they are discussed in the present specification in paragraphs [0112] – [0129]. Therefore, Plehiers does not anticipate Claim 51 for this additional reason.

Accordingly, for all of the above reasons, Applicants respectfully request withdrawal of the anticipation rejection of Claim 51 over Plehiers.

Claim 55 depends on Claim 51 and Applicants respectfully present that the anticipation rejection of Claim 55 over Plehiers does not apply for the same reasons as those discussed above with respect to Claim 51. Additionally, Claim 59 is cancelled and, therefore, the anticipation rejection of Claim 59 over Plehiers is moot.

Claim Rejections Under 35 U.S.C. § 102(b) Over Slater

Claims 51 and 54 were rejected in the Final Office Action under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,331,074 (“Slater”).

With respect to Claim 51, the Examiner stated, *inter alia*, that “Slater et al. teach compositions comprising a compound that is an organosilyl ester of a carboxylic acid wherein the carboxylic acid part of the ester is saturated at the alpha carbon (column 6, lines 46-68).” Office Action at 2-3.

Applicants respectfully traverse this rejection. Slater does not disclose hydrolysable paint compositions of the pending Claim 51. The “organosilyl ester of a carboxylic acid wherein the carboxylic acid part of the ester is saturated at the alpha carbon” cited by the Examiner as disclosed in Slater is not a component of a paint composition, let alone hydrolysable paint composition required by the pending Claim 51. Instead, the organosilyl ester of a carboxylic acid wherein the carboxylic acid part of the ester is saturated at the alpha carbon disclosed in Slater is an intermediate “crosslinking agent (B)” which is used in preparation of the coating composition of Slater. *See* Slater, col. 1, line 64 – col. 2, line 27. There is no disclosure in Slater of a paint composition comprising silylesters of Claim 51. Accordingly, Slater cannot anticipate Claim 51.

Applicants further present that the composition of Claim 51 is hydrolysable while the coating of Slater would not be expected to be hydrolysable. The effectiveness of the Slater composition lies in providing a non-stick or low energy surface, which is an entirely different approach to antifouling than that achieved in the present invention with hydrolysable compositions. Slater describes the silicon rubber compositions of Slater as being advantageous over “conventional antifouling compositions containing marine biocides which are gradually leached from the paint” while “[t]he silicone rubber coatings rely on their low surface energy, rather than on biocides, to inhibit settlement of marine organisms.” Slater at col. 1, lines 16-28. The “conventional antifouling compositions” described by Slater include hydrolysable paint

compositions which are rendered hydrolysable so that the biocide is leached out. Therefore, Slater does not relate to hydrolysable paint compositions. Accordingly, Slater cannot anticipate Claim 51 for this reason as well.

The Examiner stated in the Advisory Action that “[t]he Applicant has stated that the composition of Slater is hydrolysable, while the coating of Slater is not.” The Examiner then stated that “[i]t is the composition of Slater that is being used to reject the claims” and “[s]ince the coating is hydrolysable, the limitations are met.” Advisory Action, page 2.

Applicants respectfully disagree with these conclusions. Applicants never made a statement that the composition of Slater is hydrolysable. Instead, Applicants stated that the prior art compositions discussed in Slater are identified in Slater as hydrolysable and that Slater distinguishes Slater’s invention from the prior art hydrolysable compositions. Specifically, Applicants stated in the March 23, 2011 Response on page 6 that “Applicants respectfully present that the composition of Claim 51 is hydrolysable while the coating of Slater is not hydrolysable. Slater describes the silicon rubber compositions of Slater as being advantageous over ‘conventional antifouling compositions containing marine biocides which are gradually leached from the paint’ while ‘[t]he silicone rubber coatings rely on their low surface energy, rather than on biocides, to inhibit settlement of marine organisms.’” *Id.* Applicants then stated that “[t]he ‘conventional antifouling compositions’ described by Slater include hydrolysable paint compositions which are rendered hydrolysable so that the biocide is leached out.” March 23, 2011 Response, pages 6-7. These statements unambiguously provide that Slater discusses prior art “conventional antifouling compositions” that may be hydrolysable. In contrast, as explained above, Slater does not relate to hydrolysable paint compositions.

Furthermore, the amended Claim 51 recites an antifoulant. In contrast, as discussed above, Slater is not directed to paint compositions with an antifoulant. Accordingly, Slater cannot anticipate Claim 51 for this additional reason.

Slater also states that the hydrolysable groups should not be used in excess – “[w]e have found that an increased level of silicon-bonded hydrolysable groups provided by the crosslinking agent in the coating after curing leads to a decrease in antifouling efficiency.” *Id.* at col. 1, lines 56-63. This means that the hydrolysable groups should be no longer present in the cured coating composition because they have already been utilized in cross-linking the hydroxy functional polydiorganosiloxanes to produce the cross-linked low surface energy coating. Accordingly, the Slater composition has no mechanism for release of an antifoulant. In contrast, the antifoulant of the present composition is released by gradual hydrolysis of the paint after being coated onto the substrate.

Accordingly, for all of the above reasons, withdrawal of the anticipation rejection of Claim 51 over Slater is respectfully requested.

Claim 54 depends on Claim 51 and Applicants respectfully present that Claim 54 is not anticipated by Slater for the same reasons as those discussed above with respect to Claim 51.

Claim Rejection Under 35 U.S.C. § 103(a) Over Slater

Claims 53 is rejected under 35 U.S.C. § 103(a) as obvious over Slater.

The Examiner stated that “Slater et al. teach using mixtures of crosslinking agents (column 6, lines 44-45)” and that “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to use a mixture of acyloxysilane crosslinking agents (column

6, lines 46-67) in the composition to provide crosslinking of the polymers.” Final Office Action at 4.

Applicants respectfully traverse this rejection. As discussed above, the presently claimed compositions are hydrolysable while Slater is directed to compositions that are not hydrolysable. The prior art “conventional antifouling compositions” described by Slater include hydrolysable paint compositions which are rendered hydrolysable so that the biocide is leached out. Slater states that “[c]onventional anti-fouling paints eventually become ineffective as all their biocide is released” while “[s]ilicone rubber coatings are potentially capable of retaining their low energy surface indefinitely.” Slater at col. 1, lines 25-28. Since Slater is directed to paint compositions that are described as an improvement over the conventional antifouling paints, Slater teaches away from hydrolysable paint compositions.

Furthermore, the presently claimed compositions include an antifoulant while Slater teaches away from use of an antifoulant. As discussed above, Slater describes disadvantages of use of an antifoulant and the compositions of Slater are not designed to release an antifoulant. Even if one were to add an antifoulant to the compositions of Slater, such antifoulant would be locked into the cross-linked structure of Slater with no release mechanism.

Accordingly, for all of the above reasons, Slater does not suggest or motivate the composition of Claim 53 and withdrawal of the obviousness rejection of Claim 53 is respectfully requested.

Allowable Subject Matter

Applicants thank the Examiner for stating that Claims 56, 57, 60, and 67 are allowable

over the prior art.

CONCLUSION

Applicants respectfully submit that the application is now in proper form for favorable consideration and allowance. The Examiner is invited to contact the undersigned attorney for Applicant to discuss any outstanding issues.

The Commissioner is authorized to charge any required fees, including any extension and/or excess claim fees, any additional fees, or credit any overpayment, to Goodwin Procter LLP Deposit Account No. 06-0923.

Respectfully submitted for Applicants,

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A handwritten signature in cursive script, reading "Edward Timmer", written in black ink over a horizontal line.

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